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BALLOON CATHETER DILATION FOR CHRONIC RHINOSINUSITIS DOES NOT INCREASE THE FREQUENCY OF SINUS SURGERIES IN THE UNITED STATES

Holy C, Ellison J, Schneider C, Levine HL

Accarent, Menlo Park, CA, USA

OBJECTIVES: Balloon catheter dilation (BCD) of sinus ostia performed by surgeons to treat patients suffering from chronic rhinosinusitis (CRS) refractory to medical management has recently been shown to be safe and effective as an in-office procedure. This approach thus provides physicians with the opportunity to treat patients in a low-acuity care setting, whereas traditional endoscopic surgery is performed in the operating room. Recent publications have raised concerns about the potential for this technology to increase the number of patients surgically treated through supplier-induced or normal, patient-driven demand. This study was therefore conducted to evaluate the total volume of sinus surgeries (including BCD procedures) from 2006 to 2011, to determine whether the introduction of BCD in 2005 increased sinus surgery volumes in the United States. **METHODS:** The Marketscan databases were queried from 2006 to 2011 using CPT codes associated with functional endoscopic sinus surgery (FESS: CPT 31254 - 31288) and BCD (CPT 31295 - 31297). Total surgery and procedures counts were analyzed separately, as each surgery could include one or multiple FESS or BCD procedures (ie, one or multiple sinuses treated per patient). A projection methodology developed by Marketscan was applied to estimate US-wide frequencies. Procedural case-mix and total average payment per surgical event were also analyzed for each year of interest. **RESULTS:** Total individual procedural volume growth reached an average compounded annual growth rate (CAGR) of 1.4% from 2006 to 2011. The number of surgeries, however, only grew by a CAGR of 0.9% during that timeframe, a rate comparable to that of the overall US population (0.8%). **CONCLUSIONS:** BCD did not result in significant growth of procedures or surgeries, thus suggesting that the criteria for selecting patients for surgery did not change with the introduction of BCD. The growth in procedures slightly outpaced that of surgeries, suggesting a potentially larger number of procedures per surgery.

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BURDEN OF DISEASE OF SMOKING CESSATION IN RUSSIA: RESULTS FROM 2011 NATIONAL HEALTH AND WELLNESS SURVEY (NHWS)Annunziata K¹, Chapnick J², Mould-Quevedo J³¹Kantar Health, New York, NY, USA, ²Kantar Health, Princeton, NJ, USA, ³Pfizer, Inc., New York, NY, USA

OBJECTIVES: Tobacco smoking is one of the principal risk factors for cancer, respiratory disease, and cardiovascular disease. According to research reported by the WHO, the prevalence of current smokers in Russia in 2009 was 39%, and one-third of those who smoked in the past 12-month had made an attempt to quit. This study is aimed to assess co-morbidity, quality of life (QOL), work productivity loss, and resource utilization in Russian urban adults attempting to quit smoking. **METHODS:** Patients' self-reported data were collected from 2011 National Health and Wellness Survey (NHWS). Survey represented major urban areas in Russia. QOL was measured by the physical component score (PCS) and mental component score (MCS) of the Short Form-12 (SF-12). Loss of work productivity was measured by the Work Productivity and Activity Impairment instrument. Resource utilization was measured by health care provider, ambulance request and hospitalization in the past 6 months. **RESULTS:** Of the 10,039 adult respondents, 6,092 (60.6%) had ever smoked cigarettes (38.2% current smokers, 43.5% former smokers, 16.2% smokers trying to quit smoking and 2.1% no smokers- in process to quit). Average age of attempters was 39.5 years. Attempters group reported more co-morbidities (headache 60%, sleep difficulties 44%, insomnia 37%, heartburn 36%, pain 32%, depression 29%), lower mean scores of MCS (41.7 vs. 44.7), more number of visits to health care providers (4.9 vs. 4.2), and a higher absenteeism (5.5% vs. 3.8%) over the past 6 months (absenteeism for last week) compared to those who never smoked. Furthermore, individuals attempting to quit group reported 26.6% work productivity loss compared to 22.3% in those who never smoked. All mentioned differences were statistically significant ($p < 0.05$). **CONCLUSIONS:** In Russia, attempters to quit smoking suffer from impairment in mental QOL, work productivity loss and more co-morbidities. Findings indicate there is still an unmet need in individuals attempting to quit.

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TRENDS OF UTILIZATION OF AND SPENDING ON ANTI-TUBERCULOSIS MEDICATIONS IN THE UNITED STATES MEDICAID PROGRAM FROM 1991 TO 2011Alahmari AK¹, Aldawsari MF¹, Luder HR¹, Wigle PR¹, Kelton CM², Guo JJ¹¹University of Cincinnati College of Pharmacy, Cincinnati, OH, USA, ²University of Cincinnati College of Business, Cincinnati, OH, USA

OBJECTIVES: Tuberculosis (TB) is a serious infectious disease which affects the respiratory system. In 2011, 10,521 new TB cases were reported in the U.S. The anti-TB drug class contains both first- and second-line treatments, with the first-line regimen considered the skeleton of TB eradication. The purpose of the current study was to describe the trends in utilization of and spending on anti-TB drugs generally and individual anti-TB medications in the U.S. Medicaid Program. **METHODS:** A retrospective, descriptive analysis was conducted to examine the trends in utilization of and spending on anti-TB medications, using the national Medicaid pharmacy files from 1991 quarter 1 through 2011 quarter 2. Study drugs included isoniazid, rifampin, pyrazinamide, and ethambutol (first-line therapies); and cycloserine, kanamycin, streptomycin, amikacin, capreomycin, moxifloxacin, rifater, rifamate, thioamides, paser, rifapentine and rifabutin (second-line therapies). Quarterly prescription numbers and reimbursement amounts were calculated over time by summing data for individual drug products. The quarterly per-prescription reimbursement as a

proxy for drug price was computed for each drug. **RESULTS:** Total Medicaid utilization of anti-TB drugs rose by 43% from 151,344 in 1991 to 216,271 in 2011. Utilization of the first-line drugs increased from 47,348 in 1991 to 65,482 in 1993, stayed at this level for 4 years, and then decreased to an average of 43,245 per year. Medicaid reimbursement for anti-TB medications increased 246% (\$6.5 million to \$22.4 million) between 1991 and 2011. Prices for second-line drugs were higher than those for traditional drugs due to absence of generic availability for the newer drugs. In 2011, reimbursement for second-line agents was 10 times that for first-line therapies. **CONCLUSIONS:** Utilization of anti-TB drugs was closely related to disease incidence. The rise in spending on second-line agents may be due to increased usage for other indications along with rising prices. An effective management program for anti-TB drug prescribing might be helpful for Medicaid.

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EUROPEAN EX-FACTORY PRICE DEVELOPMENT FOR GLOBAL PHARMACEUTICAL COMPANIES IN THE CONTEXT OF THE INTERNATIONAL PRICE REFERENCE (IPR) FRAMEWORK. IMPACT OF THE GERMAN HEALTH CARE REFORM (AMNOG) ON THE EUROPEAN PRICE DEVELOPMENT FOR INNOVATIVE PHARMACEUTICALS

Ernst F

Santen GmbH, Munich, Germany

OBJECTIVES: To evaluate pharmaceutical pricing in the EU with a focus of cost-containment due to International Price Reference (IPR) in the context of the German AMNOG on pricing in Europe. **METHODS:** Qualitative research identified guidelines for international price reference from each national reimbursement body (focusing on 10 major EU countries). Reimbursement submissions and results of price negotiations per country were also reviewed to gain insight into the application of pricing guidelines. Findings are based on review of the guidelines, selected appraisals and interviews with national payers in Germany, France and UK. **RESULTS:** In consideration of existing European price differences, high-price countries have so far increasingly attempted to also lower their pharmaceutical prices: preferably with different cost containment policies and measurements and in addition referencing low-price countries in international price reference (IPR). In both situations, an international downward effect on pricing threatens to happen for global pharmaceutical companies investing in Europe. This creates a European pricing and reimbursement network of connections of countries referencing each other with the tendency to develop a standard price across European countries. Germany is directly price referenced by more than 15 countries and indirectly referenced by around 5 countries. What impact on European pricing the change from the previously free pricing and full reimbursement of patented drug prices in Germany really has, after the implementation of the AMNOG, is quantitatively hard to assess. **CONCLUSIONS:** If Germany will follow more strictly the international price referencing in the future for innovative drugs based on the AMNOG process, it will lose anchor function in European pricing with an overall international downward effect on the European pricing for innovative pharmaceuticals.

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THE DISEASE BURDEN OF PEDIATRIC ATOPIC DERMATITIS ACROSS 12 COUNTRIES IN THE ASIA PACIFIC REGIONAzmi S¹, Low W²¹Veras Research, Kelana Jaya, Malaysia, ²Azmi Burhani Consulting, Kelana Jaya, Malaysia

OBJECTIVES: Atopic dermatitis (AD), also known as eczema, is a common chronic skin condition in childhood that has negative impact on both patients and their families. A survey was conducted to evaluate the disease burden, financial and quality of life impact of moderate to severe AD across 12 countries in the Asia Pacific region. In this analysis, we examine the disease burden of pediatric AD by country. **METHODS:** A cross sectional survey was conducted in Australia, China, Hong Kong, India, Indonesia, Korea, Malaysia, Philippines, Singapore, Taiwan, Thailand, and Hong Kong. Common associated conditions with AD were food allergies, asthma and rhinitis. **CONCLUSIONS:** Results of the survey showed that moderate to severe AD is a common condition affecting infants and children with an average of 5-7 flare-ups per year lasting an average of 5 days. The burden of AD is higher among more developed countries in the Asia Pacific region.

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THE CHANGING PROFILE OF COPD IN IOWASu W¹, Carlson A², Heins-Nesvold J³¹University of Minnesota, Minneapolis, MN, USA, ²Data Intelligence Consultants, LLC, Eden Prairie, MN, USA, ³American Lung Association of the Upper Midwest, St Paul, MN, USA

OBJECTIVES: To heighten awareness of the changing demographics and health care use patterns of patients with COPD in Iowa. **METHODS:** A retrospective cohort study of Iowa hospital and outpatient events associated with COPD was constructed from Iowa hospital discharge data. Inpatient and outpatient events